



01-26-04
Image

1631/4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Nancy J. Bump et al.

Serial No.: 09/815,341

Filed: March 22, 2001

Entitled: METHODS OF IDENTIFYING
INHIBITORS OF TIE-2

Atty. Docket No.: BBC-069

ART UNIT: 1631

EXAMINER: Smith, Carolyn L.

Mail Stop DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING BY "EXPRESS MAIL"

The undersigned hereby certifies that the correspondence listed below is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" Service under 37 CFR §1.10, postage prepaid, Express Mailing Label No. ER853213168US, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

January 23, 2004

date of mailing and signature

Lisa Rasmussen

Lisa Rasmussen

TRANSMITTAL LETTER

Sir/Madam:

Transmitted herewith are: Information Disclosure Statement Under 37 CFR §§ 1.56, 1.97 and 1.98; Form PTO-1449 Information Disclosure Statement; A photocopy of each reference cited; and An Acknowledgement Postcard to be filed in the above-identified patent application.

FEE FOR ADDITIONAL CLAIMS

A fee for additional claims is not required.
 A fee for additional claims is required. The additional fee has been calculated as shown below:

	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	NUMBER OF EXCESS CLAIMS	RATE	FEES DUE
TOTAL CLAIMS	28	45	0	× \$18	= 0.00
INDEPENDENT	6	8	0	× \$84	= 0.00
FIRST INTRODUCTION OF MULT. DEPENDENT CLAIM			+\$280		= 0.00
TOTAL FEES DUE					= 00.00

PAYMENT OF ADDITIONAL FEES

The Commissioner is hereby authorized to charge payment of \$180.00 as required under 37 CFR 1.17(p) in connection with the paper(s) transmitted herewith to **Deposit Account No. 010025**. A duplicate copy of this transmittal letter is transmitted herewith.

PETITION FOR EXTENSION OF TIME

Extension is requested under 37 CFR 1.136(a), and the following extension fee is applicable for the paper(s) filed herewith: \$110.00 for response within first month pursuant to 37 CFR 1.17(a)(1);
 \$410.00 for response within second month pursuant to 37 CFR 1.17(a)(2);
 \$930.00 for response within third month pursuant to 37 CFR 1.17(a)(3);
 \$1,450.00 for response within fourth month pursuant to 37 CFR 1.17(a)(4);
 \$1,970.00 for response within fifth month pursuant to 37 CFR 1.17(a)(5);

The Commissioner is hereby authorized to charge payment of any fees required in connection with the paper(s) transmitted herewith, or to credit any overpayment of same, to **Deposit Account No. 010025** A duplicate copy of this transmittal letter is transmitted herewith.

Respectfully submitted,



Gayle B. O'Brien
Agent for Applicants
Reg. No. 48,812
Abbott Bioresearch Center, Inc.
100 Research Drive
Worcester, MA 01605
(508) 688-8053



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of : Nancy J. Bump et al.
Serial No. : 09/815,341
Filed : March 22, 2001
Entitled : METHODS FOR IDENTIFYING
INHIBITORS OF TIE-2

ART UNIT: 1645

EXAMINER:

Attorney Docket No. BBC-069

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING

The undersigned hereby certifies under 37 CFR 1.10 that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Express Mail Label No.: ER853213168US, in an envelope addressed to Mail Stop DD, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

January 23, 2004
date of mailing and signature



Lisa Rasmussen

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.56, 1.97 AND 1.98**

Sir/Madam:

In accordance with the duty of disclosure under 37 CFR § 1.56, Applicants submit this Information Disclosure Statement pursuant to 37 CFR §§ 1.97 and 1.98 for the above-identified application. Applicants makes the following publications of record in the above-identified application.

U.S. Patent Documents

Calderwood et al., December 14, 1999, U.S. Patent No. 6,001,839

Foreign Patent Documents

Arnold et al., March 30, 2000, PCT Publication WO 00/17202

Arnold et al., March 30, 2000, PCT Publication WO 00/17203

Kendall et al., October 4, 2001, PCT Publication WO 01/72761

Other Publications

Schlessinger and Ulrich, *Neuron*, 9:383-391, (1992)

Yarden and Ullrich, *Ann. Rev. Biochem.* 57:443-478, (1988)

Ullrich & Schlessinger, *Cell*, 61:203-212, (1990)

Fantl *et al.*, *Cell*, 69:413-423, (1992)

Songyang *et al.*, *Mol. Cell. Biol.*, 14:2777-2785, (1994)

Songyang *et al.*, *Cell* 72:767-778, (1993)

Koch *et al.*, *Science* 252:668-674, (1991)

Shoelson, *Curr. Opin. Chem. Biol.*, 1(2), 227-234, (1997)

Cowburn, *Curr. Opin. Struct. Biol.*, 7(6), 835-838, (1997)

Mustonen and Alitalo, *J. Cell Biol.* 129:895-898, (1995)

Ziegler, *et al.*, *Oncogene*, 8:663, (1993)

Jones, N., *et al.*, *J. Biol. Chem.*, 274(43):30896, (1999)

Needleman and Wunsch, *J. Mol. Biol.* (48):443-453 (1970)

Devereux, J., *et al.*, *Nucleic Acids Res.* 12(1):387, (1984)

E. Meyers and W. Miller, *CABIOS*, 4:11-17, (1989)

Altschul, *et al.*, *J. Mol. Biol.* 215:403-10, (1990)

Altschul *et al.*, *Nucleic Acids Res.* 25(17):3389-3402, (1997)

Roger Sayle *et al.*, *Trends Biochem. Sci.* 20: 374-376, (1995)

Nicholls *et al.*, *Proteins* 11: 281-289, (1991)

Ferrin *et al.*, *J. Mol. Graphics* 6:13-27, (1988)

Rarey *et al.*, *J. Mol. Biol.* 261: 470-489, (1996)

Kuntz *et al.*, *J. Mol. Biol.*, 161: 269-288, (1982)

Boehm, *J Comp. Aid. Mol. Des.* 6:61-78, (1992)

Bartlett *et al.*, In *Molecular Recognition in Chemical and Biological Problems*, special publication of *The Royal Chem. Soc.*, 78:182-196, (1989)

Miranker *et al.*, *Proteins* 11: 29-34, (1991)

Moon *et al.*, *Proteins* 11:314-328, (1991)

Gillet *et al.*, *J Comp. Aid. Mol. Des.* 7:127, (1993)

Muegge *et al.*, *J Med. Chem.* 42:791-804, (1999)

Cohen *et al.*, *J. Med. Chem.* 33: 883-894, (1990)

Navia *et al.*, *Current Opinions in Structural Biology* 2: 202-210, (1992)

Baldwin *et al.*, *J. Med. Chem.* 32: 2510-2513, (1989)

Other Publications cont.

Appelt *et al.*, *J. Med. Chem.* **34**: 1925-1934, (1991)

Ealick *et al.*, *Proc. Nat. Acad. Sci. USA* **88**: 11540-11544, (1991)

Brunger et al., *Acta Cryst.*, *D54*, 905-921, (1998)

Collaborative Computational Project, Number 4, *Acta Crys.t D50*, 760-763, (1994)

Jones, A.T and Kjeldgaard, M., *Methods in Enzymology*, 277, 173-208, (1997)

Kleywegt G. J. and Jones, T.A. *Methods in Enzymology*, 277, 525-545, (1997)

Kleywegt G. J., *ESF/CCP4 Newsletter*, 31, 45-50, (1995)

Navaza, J., *Acta Cryst. A50*, 157-163, (1994)

Z. Songyang *et al.*, *Nature*. 373:536-539

Voller, *et al.*, (1980) In: *Manual of Clinical Immunology*, 2d ed., edited by Rose and Friedman, pp 359-371 Am. Soc. of Microbiology, Washington, D.C.

Form PTO-1449 listing each of these documents and photocopies of each document are enclosed herewith for the Examiner's convenience.

Pursuant to 37 CFR §1.97(c)(2), this submission is accompanied by the fee under § 1.17(p).

Applicant does not intend to represent that any of the documents submitted herein is material prior art to this invention or that the list represents an exhaustive search of documents related to this invention.

Applicant respectfully requests that the documents submitted herein be considered and made of record in this application.

Respectfully submitted,



Gayle B. O'Brien
Agent for Applicant
Registration No. 48,812
Abbott Bioresearch Center, Inc.
100 Research Drive
Worcester, MA 01605-4314
Telephone: (508) 688-8053
Telefax: (508) 688-8110

<p style="text-align: center;">INFORMATION DISCLOSURE CITATION <small>(Use several sheets if necessary)</small></p> <p style="text-align: center;">JAN 23 2004</p>		Docket Number (Optional) BBC-069	Application Number 09/815,341
		Applicant(s) Nancy J. Bump et al.	
		Filing Date March 22, 2001	Group Art Unit 1645
EXAMINER	TRADEMARK OFFICE	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
		Ullrich & Schlessinger, "Signal Transduction by Receptors with Tyrosine Kinase Activity", Cell, 61:203-212, (1990)	
		Fanti et al., "Distinct Phosphotyrosines on a Growth Factor Receptor Bind to Specific Molecules that Mediate Different Signaling Pathways", Cell, 69:413-423, (1992)	
		Songyang et al., "Specific Motifs Recognized by the SH2 Domains of Csk, 3BP2, fps/fes, GRB-2, HCP, SHC, Syk and Vav", Mol. Cell. Biol., 14:2777-2785, (1994)	
		Songyang et al., "SH2 Domains Recognize Specific Phosphopeptide Sequences", Cell 72:767-778, (1993)	
		Koch et al., "SH2 and SH3 Domains: Elements that Control Interactions of Cytoplasmic Signaling Proteins", Science 252:668-674, (1991)	
		Shoelson, "SH2 and PTB Domain Interactions in Tyrosine Kinase Signal Transduction", Curr. Opin. Chem. Biol., 1(2), 227-234, (1997)	
		Cowburn, "Peptide Recognition by PTB and PDZ Domains", Curr. Opin. Struct. Biol., 7(6), 835-838, (1997)	
		Mustonen and Alitalo, "Endothelial Receptor Tyrosine Kinases Involved in Angiogenesis", J. Cell Biol. 129:895-898, (1995)	
		Ziegler, et al., "Molecular Cloning and Characterization of a Novel Receptor Protein Tyrosine Kinase from Human Placenta", Oncogene, 8:663, (1993)	
		Jones, N., et al., "Identification of Tek/Tie2 Binding Partners", J. Biol. Chem., 274(43):30896, (1999)	
		Needleman and Wunsch, "A General Method Applicable to the Search for Similarities in the Amino Acid Sequence of Two Proteins", J. Mol. Biol. (48):443-453 (1970)	
		Devereux, J., et al., "A Comprehensive Set of Sequence Analysis Programs for the VAX", Nucleic Acids Res. 12(1):387, (1984)	
EXAMINER		DATE CONSIDERED	

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<p style="text-align: center;">INFORMATION DISCLOSURE CITATION <small>Use several sheets if necessary)</small></p> <p style="text-align: center;">JAN 23 2004</p>		<p>Docket Number (Optional) BBC-069</p> <p>Application Number 09/815,341</p> <p>Applicant(s) Nancy J. Bump et al.</p> <p>Filing Date March 22, 2001</p> <p>Group Art Unit 1645</p>
<p>EXAMINER <i>REVIEWED</i> TRADEMARK OFFICE</p> <p>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</p> <p>E. Meyers and W. Miller, "Optimal Alignments in Linear Space", CABIOS, 4:11-17, (1989)</p> <p>Altschul, et al. "Basic Local Alignment Search Tool", J. Mol. Biol. 215:403-10, (1990)</p> <p>Altschul et al., "Gapped BLAST and PSI-BLAST: A New Generation of Protein Database Search Programs", Nucleic Acids Res. 25(17):3389-3402, (1997)</p> <p>Roger Sayle et al., "RASMOL: Biomolecular Graphic for All", Trends Biochem. Sci. 20: 374-376, (1995)</p> <p>Nicholls et al., "Protein Folding and Association: Insights from the Interfacial and Thermodynamic Properties of Hydrocarbons", Proteins 11: 281-289, (1991)</p> <p>Voller, et al., (1980) "Enzyme-Linked Immunosorbent Assay," In: Manual of Clinical Immunology, 2d ed., edited by Rose and Friedman, pp 359-371 Am. Soc. of Microbiology, Washington, D.C.</p> <p>Ferrin et al., "The MIDAS Display System", J. Mol. Graphics 6:13-27, (1988)</p> <p>Rarey et al., "A Fast Flexible Docking Method Using an Incremental Construction Algorithm", J. Mol. Biol. 261: 470-489, (1996)</p> <p>Kuntz et al., "A Geometric Approach to Macromolecule-Ligand Interactions", J. Mol. Biol., 161: 269-288, (1982)</p> <p>Boehm, "The Computer Program LUDI: A New Method for the De Novo Design of Enzyme Inhibitors", J Comp. Aid. Mol. Des. 6:61-78, (1992)</p> <p>Bartlett et al. "CAVEAT: A Program to Facilitate the Structure-derived Design of Biologically Active Molecules" in Molecular Recognition in Chemical and Biological Problems, special publication of The Royal Chem. Soc., 78:182-196, (1989)</p> <p>Miranker et al. "Functionality Maps of Binding Sites: A Multiple Copy Simultaneous Search Method", Proteins 11: 29-34, (1991)</p>		
EXAMINER		DATE CONSIDERED

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<p style="text-align: center;">01 INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)</p> <p style="text-align: center;">JUN 23 2004 U.S. PATENT & TRADEMARK OFFICE</p>		Docket Number (Optional) BBC-069	Application Number 09/815,341
<p style="text-align: center;">*EXAMINER INITIAL PATENT & TRADEMARK OFFICE</p>		Applicant(s) Nancy J. Bump et al.	Filing Date March 22, 2001
<p style="text-align: center;">OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</p>			
		Moon et al. "Computer Design of Bioactive Molecules: A Method for Receptor-Based de Novo Ligand Design", Proteins 11:314-328, (1991)	
		Gillet et al. "SPROUT: A Program for Structure Generation", J Comp. Aid. Mol. Des. 7:127, (1993)	
		Muegge et al., "A General and Fast Scoring Function for Protein-Ligand Interaction: A Simplified Potential Approach", J Med. Chem. 42:791-804, (1999)	
		Cohen et al., "Molecular Modeling Software and Methods for Medicinal Chemistry", J. Med. Chem. 33: 883-894, (1990)	
		Navia et al. "Use of Structural Information in Drug Design", Current Opinions in Structural Biology 2: 202-210, (1992)	
		Baldwin et al. "Thienothiopyran-2-sulfonamides: Novel Topically Active Carbonic Anhydrase Inhibitors for the Treatment of Glaucoma", J. Med. Chem. 32: 2510-2513, (1989)	
		Appelt et al. "Design of Enzyme Inhibitors Using Iterative Protein Crystallographic Analysis", J. Med. Chem. 34: 1925-1934, (1991)	
		Ealick et al. "Application of Crystallographic and Modeling Methods in the Design of Purine Nucleoside Phosphorylase Inhibitors", Proc. Nat. Acad. Sci. USA 88: 11540-11544, (1991)	
		Brunger et al., "Crystallography & NMR System: A New Suite for Macromolecular Structure Determination", Acta Cryst., D54, 905-921, (1998)	
		Collaborative Computational Project, Number 4, "The CCP4 Suite: Programs for Protein Crystallography", Acta Cryst. D50, 760-763, (1994)	
		Jones, A.T and Kjeldgaard, M. "Electron-Density Map Interpretation", Methods in Enzymology 277, 173-208, (1997)	
		Kleywegt G. J. and Jones, T.A. "Detecting Folding Motifs and Similarities in Protein Structures", Methods in Enzymology 277, 525-545, (1997)	
EXAMINER		DATE CONSIDERED	

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>		Docket Number (Optional) BBC-069	Application Number 09/815,341
		Applicant(s) Nancy J. Bump et al.	
		Filing Date March 22, 2001	Group Art Unit 1645
EXAMINER <i>TRADEMARK OFFICE</i>	OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>		
	Kleywelt G. J., "Dictionaries for Heteros", ESF/CCP4 Newsletter 31, 45-50, (1995)		
	Navaza, J., "AmoRe: An Automated Package for Molecular Replacement", Acta Cryst. A50, 157-163, (1994)		
	Z. Songyang et al., "Catalytic Specificity of Protein-Tyrosine Kinases is Critical for Selective Signalling", Nature. 373:536 539		
EXAMINER	DATE CONSIDERED		

***EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.**